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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/582,790	07/05/2000	FUJIO MORI	2000-0938A	2735

7590 09/07/2004
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WASHINGTON, DC 20006

EXAMINER

UHLIR, NIKOLAS J

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 09/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/582,790

Applicant(s)

MORI, FUJIO

Examiner

Nikolas J. Uhlir

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

In view of the appeal brief filed on 06/17/2004, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 22-43 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The methods for measuring the tensile strength/tensile elongation at break properties of the decorating sheet described in the specification and included in the instant claims require these properties to be measured under a fixed load and under a

constant rate. In order for the measurement to be taken under these conditions, temperature would have to be varied in a controlled manner. However, the disclosure does not describe/explain, or mention how temperature is varied in these measurements. As a result, in order for one of ordinary skill in the art to make and use the invention as disclosed, they would have to try to recreate applicants data by measuring samples similar to applicants disclosed in the specification, while varying the temperature until the results matched. This in and of itself would be an onerous task, because one of ordinary skill in the art would have to run a potentially infinite number of slow tensile testing experiments in search of applicants undisclosed temperature parameter.

Second, the instant claims are very broad, because the methods required by the instant claims for measuring the tensile strength and tensile elongation at break do not specify a thickness at which these properties are measured. Thus, any polymeric material, simply by virtue of varying its thickness, could be made to meet the applicant's claims. Though the specification provides some examples that disclose the thickness of the decorating sheet that was measured, these examples only disclose the *young's modulus* of the films. There are no examples in the specification which disclose the thickness of the film that was measured when tensile elongation at break or tensile strength at break is measured. Further, the specification and the claims only disclose generic names of large species of polymers (i.e. polyethylenes; biaxially oriented PET; Acrylic; Polycarbonate). Applicant has argued on the record that the tensile strength and tensile elongation properties of a polymeric film are dependent on material, and that it

cannot be established that a "generic" polymer of the type disclosed in the instant specification necessarily possesses the claimed properties, because there are many different types of polymers falling within that generic classification (see the appeal brief, dated 06/17/2004, page 6, paragraph 2). In other words, the applicant has correctly asserted that all polymers of a generic class are not created equal. I.e. all polyethylenes are not the same; all acrylates are not the same; etc. Bearing this in mind, applicant's disclosure in the specification of generic classes of polymers used for the decorating sheet provides almost no guidance that would aid one of ordinary skill in the art in choosing specific polymers within these broad species of polymers that would meet the applicant's required tensile strength properties when measured by the applicant's disclosed method.

In view of the lack of guidance in the specification as to how exactly the tensile properties are measured (in particular the lack of a discussion of how the temperature is varied), the lack of guidance in how to choose an appropriate polymer meeting applicants required tensile properties, and the lack of the disclosure of the thickness at which the tensile properties of the films are measured, the examiner takes the position that one of ordinary skill in the art would not be able to make and use the invention without undue experimentation.

2. Claims 23-43 rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a decorating sheet made of specified polymers, wherein the decorating sheet has specific tensile properties at a disclosed thickness,

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does not reasonably provide enablement for a decorating sheet made from any polymer material, wherein the decorating sheet has specific tensile properties at an undisclosed thickness. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. The examiners argument in this respect is largely the same as that for the above non-enablement rejection. Applicant's claims do not require the tensile measurements to be performed at a defined thickness. Thus, any polymer material could read on the applicants claim language because the tensile properties could be achieved simply by changing the thickness of the polymer. As a result, the tensile properties that are required by the instant claims do not further limit the claims, because the method by which they are measured is incomplete.

Accordingly, applicants have claimed "any" decorating sheet made from "any" polymer, so long as it is "capable" of having the required tensile properties at "a" thickness.

Applicant's disclosure however, is not enabling for the potentially infinite number of species that fall under this classification.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 23-43 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The examiners argument is largely the same as that presented above for the rejections under 35 U.S.C. first paragraph, in that the method of

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measuring the tensile properties of the decorating sheet is incomplete because it does not disclose the thickness of the samples and does not disclose the manner in which the temperature was varied in the measurement, so as to measure the tensile strength of the film under constant load and constant rate of elongation.

Further, the examiner notes that the applicant has required the decorating sheet to have a tensile strength at breakage of at least 23 gf. The examiner is uncertain whether gf means "grams*foot" or "grams*force." In any respect, this is an improper unit for tensile strength at break, because the unit does not include a thickness parameter.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 22-28, 33-36, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al. (JP09300397).

7. It is noted that a translation of Mori has been included with a previous office action. All references to this document refer to the translations.

With respect to the limitations of claim 22, Mori et al. teaches an insert film used to obtain molded products having a wood grain pattern. This insert film comprises an acrylic layer 2 (equivalent to applicants substrate sheet), a grain pattern layer 3, a base

layer 4, a color sheet 5 (equivalent to applicants claimed backing sheet), and an adhesive layer 8 (page 8, section 14).

With respect to the property limitations of claim 22, although the examiner acknowledges that Mori et al. does not specifically teach these required properties, in view of the fact that the methods by which the tensile properties were measured do not require a sample of a specified thickness, the examiner takes the position that the insert film of Mori meets these requirements. Applicant's tensile measurements/properties, by not requiring a thickness, are read on by any in-mold decorating sheet that is capable of exhibiting the claimed properties at "a" thickness. The examiners position is that the film of Mori is so capable, in view of the similarities between the materials utilized by Mori and the instant application.

Alternatively, it is noted that Mori et al. does teach that the thickness of both the color sheet 5 and the acrylic film 2 have an impact on the mechanical strength exhibited by the film (sections 25 and 36). Further, in a specific embodiment, Mori et al. teaches a 125 μ (.125mm) methyl methacrylate (an acrylic) layer, upon which is formed a pigmented 400 μ (.4mm) polyacrylonitrile-butadiene-styrene (ABS) layer as the color layer (section 63). This example is very similar to those disclosed by the applicant in the table on page 30 of the instant specification, wherein applicant describes the properties of in-mold decorating sheets utilizing an acrylic substrate sheet that is .07 μ thick and an ABS backing sheet that is 0.33mm thick as having properties meeting applicants claim limitations, and that as the thickness of the backing layer goes up, the young's modulus of the film increases. It should be noted also that the specification does not appear to

describe any process steps that would result in the materials utilized for the backing and substrate sheets to be chemically different (i.e. through extra crosslinking, annealing, etc.) from those described in Mori et al.

Thus, as the specific example of Mori et al. matches the materials used by the applicant for both the substrate and backing sheets (acrylic and ABS), and because the backing layer of this example exceeds the thickness of all of the examples listed in the table on page 30 of the instant specification, the examiner takes the position that the film of Mori et al. will necessarily possess or exceed the properties required by claim 22.

It has been held that where claimed and prior art products are identical or substantially **identical in structure or composition**, or are produced by identical or substantially identical processes, **a *prima facie* case of either anticipation or obviousness has been established and the burden of proof is shifted to applicant** to show that prior art products do not necessarily or inherently possess characteristics of claimed products where the rejection is based on inherency under 35 USC 102 or on *prima facie* obviousness under 35 USC 103, jointly or alternatively. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the *prima facie* case can be rebutted by **evidence** showing that the prior art products do not necessarily possess the characteristics of the claimed product. *In re Best*, 562 F.2d at 1255, 195 USPQ at 433.

Regarding the process limitations for forming a decorated article required by claim 22, Applicants are reminded that claim 22 is directed towards a decorating sheet, not a method for manufacturing a decorated article. However, for completeness, Mori et al. teaches the applicants process in section 41 of the translation.

Regarding the limitations of claim 23 requiring the in-mold decorating sheet to have a product of young's modulus and cube of thickness of at least 1 kgfmm. The examiner takes the position that the film of Mori et al. as stated above for claim 22 necessarily meets this limitation. Mori et al. teaches a film that is made of the same materials as that listed by the applicant on page 30 of the specification, and exceeds the thickness of the substrate and backing layers utilized by the applicants film (which upon examination of applicants examples would likely result in a film exhibiting a higher young's modulus than any of applicants examples).

Regarding the process limitations in claim 23, once again, applicant is respectfully reminded that claim 23 is directed towards an in-mold decorating sheet, not a method of making a decorated article. However, these limitations are met as set forth above for claim 22.

Regarding the limitations of claim 24, wherein applicant requires the decorating sheet to have specific pencil hardness on the side of the sheet opposite the side to be bonded to the resin. The examiner again takes the position that the film of Mori et al. necessarily meets the property limitations required by the applicant in the instant claims; as stated above for claims 22-23. The film of Mori et al. matches the materials utilized by the applicant, and exceeds the thickness of applicant's films. Further, ABS resin is

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listed as a material having the required pencil hardness on page 42 of the instant specification.

Regarding the limitations of claim 25, wherein applicant requires that the substrate film be manufactured from one of the materials listed. Mori et al. clearly teaches utilizing acrylics to form the substrate sheet, as stated above. Thus, as acrylics are listed as suitable materials to meet the requirements of claims 25, this limitation is met.

Regarding the limitations of claim 26, wherein the applicant requires the thickness of the decorating sheet to be $\geq 250\mu$, wherein the thickness of the decorating sheet minus the backing sheet is $\leq 200\mu$, and the color of the backing sheet is within the specified range. Mori et al. in a specific example teaches a 125μ acrylic substrate that is coated with a wood grain layer, a base layer, and a 400μ thick ABS color sheet (equivalent to applicants backing layer). Thus, the total thickness of the decorating sheet of Mori et al. is 525μ ($125\mu + 400\mu$) (sections 61-62). Mori et al. further teaches that the total thickness of the insert film should not be greater than 600μ (section 38). Thus, it is logical to conclude that the maximum thickness of the wood grain layer and the base layer is 75μ ($600\mu - 525\mu$), resulting in the maximum thickness of decorating sheet minus the backing sheet to be 200μ ($75\mu + 125\mu$). Thus, as the thickness of the decorating sheet of Mori et al. exceeds 250μ , and the thickness of the decorating sheet minus the backing sheet is at most 200μ , the thickness limitations of claim 26 are met.

Regarding the color limitations of claim 26. Mori et al teaches that the color sheet is pigmented (section 32). It is well established in the art that the amount and type of a

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pigment utilized to color a resin material affects the resulting color, hue, lightness, etc., of the resin.

Therefore it would have been obvious to one with ordinary skill in the art to change the type and amount of pigment used in the color sheet of Mori et al. to achieve a desired color.

One would have been motivated to make such a modification for many reasons, including aesthetic appeal and color matching of the color sheet to the grain pattern layer.

With respect to the limitations of claim 27, wherein the applicant requires the backing sheet to be formed from one of the listed materials, Mori et al. clearly teaches a color sheet (equivalent to applicants backing sheet) of ABS (acrylonitrile butadiene styrene resin as stated above. As ABS resin is listed a suitable for forming the backing sheet in claim 27, this limitation is met.

Regarding the limitations of claim 28, wherein applicants require the backing sheet to be of a material that prevents vaporization and foaming.

Although Mori et al. does not specifically teach this limitation, Mori et al. does teach a color sheet (equivalent to applicants backing sheet) formed of ABS resin, as stated above. As elucidated by claim 36, ABS resins prevent vaporization and foaming. Thus, as the material utilized by Mori et al. matches one of the materials listed as a suitable material for preventing vaporization and foaming. This limitation is met.

Applicants are referred to the citation of In Re Best in paragraph 15 above.

With respect to the limitations of claims 33, wherein applicant requires wherein applicant requires a first pattern layer to be formed between the substrate sheet and the backing sheet. Mori et al. teaches the formation of a wood grain pattern layer (equivalent to applicants claimed 1st pattern layer between an acrylic layer (equivalent to applicants claimed substrate) and the color sheet (equivalent to applicants backing layer) (page 2, claim 1 of translation and figures 1 and 2). Thus, the limitations of claim 33 are met.

Regarding the limitations of claim 34, wherein applicant requires a second pattern layer between the backing sheet and the substrate sheet. Mori et al. teaches the formation of a base layer and a wood grain pattern layer between the substrate and the backing sheet (page 2, claim 1, figures 1 and 2). The base layer can be patterned (section 19). Thus, the examiner takes the position that when the base layer is patterned, it is equivalent to applicants claimed 2nd pattern layer.

Regarding the limitations of claims 35 and 36 wherein applicant requires the material of the substrate to be one that is vaporizable and foamable, and, and the material of the backing sheet to be a material which prevents vaporization and foaming (claim 35), specifically where the material of the backing layer is one of the materials listed in claim 36. Mori et al. teaches a color sheet (equivalent to applicants backing sheet) formed of ABS resin, and thus meets the limitations for the backing sheet in claims 35 and 36. The examiner takes the position that acrylics meet the definition of "vaporizable and foamable," as the applicant in the instant specification utilizes an

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acrylic substrate layer in every example. Thus, as Mori et al. teaches an acrylic substrate layer, the limitations of claim 35 and 36 are met.

Regarding the limitations of claim 43, wherein the applicant requires method for forming a decorated article utilizing an in-mold decorating sheet. The material properties required by claim 43 are met as set forth above for claim 22. Further, Mori et al. in sections 40 and 41 of the translation teaches the method limitations required by claim.

8. Claims 29-32 and 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al. as applied to claim 22 above, and further in view of Lau et al. (US2001/0020047).

9. Mori et al. teaches that suitable resin materials for the color sheet (equivalent to applicants backing layer) include polypropylenes, polyurethanes, EVA, ABS, and other resins (section 32).

Therefore it would have been obvious to one of ordinary skill in the art to utilize polypropylene as the color layer in Mori et al., as polypropylene is taught to be equivalent to the other resins listed as suitable.

Applicants are respectfully reminded that substitution of equivalents requires no express motivation as long as the prior art recognizes the equivalency. *In Re Fount* 213 USPQ 532 (CCPA 1982); *In Re Siebentritt* 152 USPQ 618 (CCPA 1967); *Grover Tank & Mfg. Co. Inc V. Linde Air Products Co.* 85 USPQ 328 (USSC 1950).

However, even when polypropylene is utilized as the color sheet, Mori et al. does not teach a backing sheet that has a shrinkage factor that differs from the shrinkage

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factor of the substrate sheet by 0-.008, as required by claim 29. Nor does Mori et al. teach utilizing a polypropylene film containing 20-150 parts by weight of an olefin rubber and 5-20 parts by weight of talc, as required by claims 30-32.

However, Lau et al. teaches a polyolefin mixture suitable for molding that exhibits improved surface characteristics, such as scratch resistance and abrasion resistance (sections 3 and 83). Examples of suitable polyolefin's taught by Lau et al. include polypropylene, polyethylene, and other C₅-C₂₀ olefins (section 29). The polyolefin mixture comprises 55-99% by weight of a base polyolefin such as polypropylene, 1-30 weight % of an ethylene/ α -olefin copolymer, such as a copolymer of ethylene and propylene, and 1-30 weight % of a filler such as talc (sections 30, 32, and 41). The addition of the ethylene/ α -olefin copolymer and the talc filler improves the surface characteristics of the polyolefin (sections 3, 32 and 41)

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate 1-30% by weight of a filler such as talc and 1-30% by weight of a ethylene-propylene copolymer as taught by Lau et al. into the polypropylene layer of Mori et al.

One would have been motivated to make this modification due to the teaching in Lau that the surface characteristics of a polyolefin such as polypropylene are improved through the incorporation of a an ethylene/ α -olefin copolymer and a filler.

Regarding the specific selection of Talc and ethylene-propylene as the additives to the propylene film of Mori et al., one would have been motivated to select these materials in particular as they are taught to not only be equivalent to the other materials

listed as suitable additives in Lau et al., but are also listed as being "preferred" additives.

Thus, the combination of Mori et al. with Lau et al. results in a decorating film that has an acrylic base, and a propylene backing layer that contains the same additives in the required amounts as required by claims 29-32. Thus, as the decorating sheet resulting from the combination of Mori et al. with Lau et al. is manufactured from the same materials required by claims 30-32, the examiner takes the position that the limitation of claim 29, wherein applicant requires a specific shrinkage difference between the substrate and the base sheet is met. Applicants are referred to the citation of In Re Best above.

Regarding the limitations of claims 37-38, which requires many of the same requirements as claims 29-32, with the exception being that the applicant requires the backing sheet to comprise "plural" sheets. Mori et al. teaches that the color sheet can be formed of multiple layers (section 32).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the color sheet of Mori et al. as a multiple layer, as this structure is taught to be equivalent to a single layer color sheet.

As stated above, it has been established that it would have been obvious to form the color sheet of Mori et al. from polypropylene. Thus, when polypropylene is utilized to form the multilayer color sheet, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a filler such as talc and an additive

such as ethylene-propylene copolymer as taught by Lau et al. into the polypropylene layers making up the multilayer polypropylene color sheet of Mori et al.

One would have been motivated to make this modification due to the teaching in Lau that the surface characteristics of a polyolefin such as polypropylene are improved through the incorporation of a an ethylene/ α -olefin copolymer and a filler.

Regarding the specific selection of Talc and ethylene-propylene as the additives to the propylene film of Mori et al., one would have been motivated to select these materials in particular as they are taught to not only be equivalent to the other materials listed as suitable additives in Lau et al., but are also listed as being "preferred" additives.

Thus, the combination of Mori et al. with Lau et al. results in a decorating film that has an acrylic base, and a multilayer propylene backing layer that contains the same additives in the required amounts as required by claims 29-32. Thus, as the decorating sheet resulting from the combination of Mori et al. with Lau et al. is manufactured from the same materials required by claim 38, the examiner takes the position that the limitation of claim 29, wherein applicant requires a specific shrinkage difference between the substrate and the base sheet is met. Applicants are referred to the citation of In Re Best above.

10. Claims 39-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al. as applied to claims 1 and 43 above, further in view of Kitamura et al. (0475085).

A written translation of the Kitamura et al. document accompanied a prior office action.

11. Regarding the limitations of claims 39-42, wherein the applicant requires a specific method for manufacturing an in-mold decorating sheet, Mori et al. teaches all of the requirements for forming the decorated article in sections 40-41 of the translation, and meets the property requirements for the decorating film as set forth above for claim 22. Further, Mori et al. teaches forming the decoration film by laminating the layers to one another in the respective order (section 35).

However, Mori et al. does not teach forming the pattern layer on either the backing sheet or the substrate sheet by laminating a carrier having a dimensional change rate of 0.6% under a temperature of 90° C onto one of the backing sheet and substrate sheet; and covering the pattern layer with the other of the backing g or substrate sheet such that the pattern layer is between the substrate and backing sheet (as required by claim 39), wherein the carrier is removed prior to covering the pattern (as required by claim 41), wherein the carrier sheet exhibiting a dimensional change rate of 0.6% is a biaxially oriented polyester or polypropylene film (as required by claims 40 and 41).

However, Kitamura et al. teaches a method for transferring a pattern (functional) layer to a planar or 3d shaped article, such that the pattern can be precisely positioned and formed without breaking (page 2, section 3, page 6, second paragraph, page 8, 1st paragraph, and page 11, lines 1-4). This method includes forming a pattern (functional) layer on the surface of a biaxially stretched polyolefin (equivalent to applicants claimed

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carrier sheet) such as biaxially stretched polypropylene, wherein a release layer is formed between the pattern and biaxially stretched layers, adhering the 3 layer film to the planar or 3d shaped article, and removing the biaxially stretched layer (page 4-9, figure 3).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the method taught by Kitamura et al. to form the pattern layer on the acrylic substrate taught by Mori et al.

One would have been motivated to utilize this method due to the teaching in Kitamura et al. that utilizing a transfer foil such as the one described allows for a pattern layer to be precisely applied to a planar or 3d shaped article without breakage.

Regarding the property requirements for the carrier sheet required by claims 39-42, the examiner takes the position that these requirements are met, as the carrier sheet of Kitamura et al. identically matches one (biaxially oriented polypropylene) of the materials in claims 40 and 42 which are listed as suitable materials possessing these properties. Applicants are respectfully referred to the citation of In re Best above.

Response to Arguments

12. Applicant's arguments with respect to claims 22-43 have been considered but are moot in view of the new ground(s) of rejection. the examiner believes that all of applicants arguments are rebutted clearly by the new grounds of rejection. Specifically, the new grounds of rejection clearly elucidate that applicant's claim language requiring specific tensile properties measured via a specific method is open to being read on by any polymer material that is capable of meeting those tensile properties at "a" thickness.

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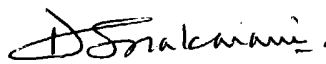
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nikolas J. Uhlir whose telephone number is 571-272-1517. The examiner can normally be reached on Mon-Fri 7:30 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on 571-272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


nju


D. S. NAKARANI
PRIMARY EXAMINER, Acting SPE